



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/768,271	01/25/2001	Tsukasa Yajima	PNET.009D	3802

7590 07/31/2002

JONES & VOLENTINE, L.L.P.  
Suite 150  
12200 Sunrise Valley Drive  
Reston, VA 20191

EXAMINER

MAI, ANH D

ART UNIT

PAPER NUMBER

2814

DATE MAILED: 07/31/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/768,271

Applicant(s)

YAJIMA, TSUKASA

Examiner

Anh D. Mai

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 6-9 and 11-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6-9 and 11-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 January 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.

- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

Art Unit: 2814

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 22, 2002 has been entered.

### *Amendment*

2. Amendment C filed May 22, 2002 has been entered as Paper No. 7. Claim 6 has been amended; claims 16-19 are newly added; claims 6-9 and 11-19 are pending.

### *Drawings*

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "insulating layer formed on the substrate, first and second gate, side walls, field oxide and protective layer; contact hole formed through the insulating layer and connecting wire coupled to the gate through the contact hole" **must be shown or the feature(s) canceled** from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Art Unit: 2814

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 6-9 and 11-19 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Yoo et al. (U.S. Patent No. 5,605,853).

Yoo teaches a semiconductor device as claimed including:

first and second gates (16) formed on an active region of a substrate (10), the first and second gates consisting of a refractory metal layer (28) on a polysilicon layer (16);

a field oxide (12) formed on the substrate (12) between the first and second gate (16);

side walls (20) formed on side surfaces of the gates (16), the side walls being a silicon oxide film;

a protective layer (21) formed on the field oxide (12), the protective layer being a material different than the field oxide;

an insulating layer (38) formed on the substrate (10), the gates (16), the side walls (20), the field oxide (12) and the protective layer (21);

a contact hole formed through the insulating layer (38); and

a connecting wire (40) coupled to the gate (16) through the contact hole. (See Fig. 7, col. 3-5).

Art Unit: 2814

With respect to claim 8, the protective layer (21) of Yoo is formed on the field oxide (21) only.

With respect to claim 11, Yoo teaches a semiconductor device as claimed including:

a gate (16) formed on an active region of a substrate (10);

a field oxide (12) formed on the substrate adjacent the active region;

a protective layer (21) formed on the field oxide (12), the protective layer being a material different than the field oxide;

an insulating layer (38) formed on the substrate (10) including the gate (16), the field oxide (12) and the protective layer (21);

a contact hole formed through the insulating layer (38); and

a connecting wire (40) coupled to the gate (16) through the contact hole, the protective layer (21) being formed on the field oxide (12) only. (See Fig. 7, col. 3-5).

With respect to claim 14, the gate (16) of Yoo further comprises side walls (20) formed on side surface of the gate (16), the side walls being covered by the insulating layer (38).

With respect to claim 16, Yoo teaches a semiconductor device as claimed including:

a gate (16) formed on an active region of a substrate (10), the gate (16) consisting of a refractory metal layer (28) on a polysilicon layer (16);

side walls (20) formed on side surfaces of the gates (16), the side walls being a silicon oxide film;

a field oxide (12) formed on the substrate (12) adjacent the active region;  
a protective layer (21) formed on the field oxide (12), the protective layer being a material different than the field oxide;  
an insulating layer (38) formed on the substrate (10), the gates (16), the side walls (20), the field oxide (12) and the protective layer (21);  
a contact hole formed through the insulating layer (38); and  
a connecting wire (40) coupled to the gate (16) through the contact hole, the protective layer (21) being formed on the field oxide (12) only (See Fig. 7, col. 3-5).

With respect to claims 7, 12, 17, the protective layer (21) is a polysilicon layer.

With respect to claims 9, 13, 18, the gate (16) is a MOSFET gate.

With respect to claims 15, 19, the semiconductor device of Yoo further comprising an additional gate (16) formed on the substrate (10), the field oxide (12) being formed on the substrate between the gate (16) and the additional gate (16).

### ***Response to Arguments***

5. Applicant's arguments with respect to claims 11-14 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh D. Mai whose telephone number is (703) 305-0575. The examiner can normally be reached on 8:30AM-5:00PM.

Art Unit: 2814

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Olik Chaudhuri can be reached on (703) 306-2794. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

A.M  
July 26, 2002

  
OLIK CHAUDHURI  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800